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Written on DECEMBER 22, 2011 AT 8:30 AM by PROSS

The Power of Acupuncture: Part 1 of 3

Filed under UNCATEGORIZED

(2 COMMENTS)

By Capt. Elwood W. Hopkins, Neurologist, Naval Hospital Bremerton, Wash.



After 40 years of practicing neurology it was only natural to begin thinking about something else and when the e-mail arrived from our Specialty Leader announcing the opportunity to learn how to do acupuncture, I submitted my application to the Navy Bureau of Medicine and Surgery that same day.

Having been trained both as a biochemist and a neurologist my requirement was to establish a fundamental scientific understanding of acupuncture. I needed to see the supporting research and data, if any

existed, if I was going to embrace this mysterious tool.

Happily, my intellect was actively engaged by the charismatic master acupuncturist, Dr. Alejandro Claraco, call sign “The Matador”. His lectures laid a neurophysiologic foundation for our class, emphasizing the contemporary understanding of how acupuncture works at distinct loci within the nervous system.

Traditionally identified, clinically effective acupuncture points exist at neurovascular bundles where a number of neurochemical changes are elicited by acupuncture. Local physiologic changes such as vasodilatation, suppression of prostaglandins and cytokines, inhibition of substance P secretion, and reversal of tissue acidosis are just a few of the measurable effects along the needle tract.

Further, at the level of the dorsal horn in the spinal cord, where convergence of sensory inputs are sorted, the acupuncture signals being carried by non-nociceptive fibers activate the “gate control” system for suppressing painful stimuli entering via the slow, unmyelinated c-fiber pathways.

At the segmental level of the spinal cord, chronification of pain signals is executed by “winding up” of second order neurons (also seen in post-tetanic potentiation occurring at peripheral neuromuscular junctions to effect stronger muscle contractions, and as may occur in the cerebral cortex in some forms of epilepsy). This “wind-up” can be blocked by acupuncture, facilitating local relaxation of muscles that may be in spasm as well as suppressing recurring peripheral pain signals that have been augmented by the “wind up” process.

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Perhaps even more compelling evidence for how acupuncture works comes from functional MRI observations and central samplings of neurosecretory events that reveal activation of the hypothalamus, suppression of the amygdala and increased secretions of beta-endorphins; all beneficial in not only pain control, but resetting normal controls within the autonomic nervous system and maintaining CNS homeostasis.

Accelerated bone healing of fractures and inhibition of bone demineralization in a zero gravity environment are just some of the other convincing effects of acupuncture demonstrated in animal models. The extensive reference library provided by the course included many excellent research papers covering a vast array of topics dealing with acupuncture.

Was my intellect whetted? You can probably sense by now that it was indeed. But, although a sound foundation for any endeavor is scientifically satisfying, actually seeing and experiencing the clinical application of this ancient art was yet to occur.

Part two will run on Thursday, Dec. 29.

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David Roen

Sir,

I thought you might want to know about an article critical of your acceptance of acupuncture.

Mark Roberts

Perhaps the article David Roen referred to is this one by Harriet Hall at the Science Based Medicine website:

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Written on DECEMBER 29, 2011 AT 8:58 AM by PROSS

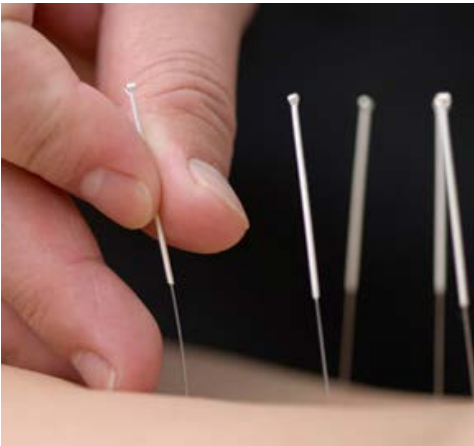
The Power of Acupuncture: Part 2 of 3

Filed under UNCATEGORIZED

(4 COMMENTS)

By Capt. Elwood W. Hopkins, Neurologist, Naval Hospital Bremerton, Wash.

This blog is part two of a three part series. Part one was posted on Dec. 22.



Most of us in the class were respectful of the information but remained skeptical. Could the clinical effects just be another placebo effect? Certainly if subjective measures are the outcome to be expected, then a placebo effect could not be discounted. There is no honest way to perform a placebo-controlled double blind randomized study of acupuncture, especially if pain is the primary endpoint being measured. In fact, it was emphasized that functional outcome measures are what we should be striving for when treating patients with acupuncture. Dr. Claraco

repeatedly wanted to know what a patient could not do because of the condition to be treated, and did not care what number they chose on the pain scale. His measure of success was an objective improvement of function.

Becoming a believer. There is nothing like personal experience to convince one of an effect. It is a bit like not requiring a double blind placebo controlled cross-over study to establish that an open parachute is more effective than a closed one. After the introductory lectures and our first practical session of learning the proper technique of painless needle insertions (the first needles are always placed by the student in their own leg – a great motivator for learning the difference between painless and not-so needle insertions), Dr. Claraco asked if any members of the class had conditions that might be treated with acupuncture.

Not believing that anything could be done to change my 30-plus years of Raynaud’s, I volunteered this information and was surprised when “The Matador” raised one eyebrow, smiled and beckoned me to sit facing the class while he examined my neck, and not my peripheral pulses. Finding what he was looking for, he inquired about my past history of trauma (motor vehicle, motorcycle, football, etc), consistent with what his exam had revealed and believing that my Raynaud’s was due to prior cervical injury (especially to posterior rami) as the pathophysiologic basis for the dysfunctional sympathetic tone in the hands and fingers (which in retrospect make sense as the Raynaud’s did not effect my feet or toes).

I was then placed prone on the treatment table (standard portable chiropractic/massage

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type) while four needles were inserted in the paraspinous regions of T2-T6 (where the sympathetics exit from the intermediolateral column of the spinal cord) to which electrical stimuli were applied for about 10 minutes. I felt no immediate changes in my hands or fingers (which were asymptomatic in the warm classroom), but my neck certainly was more supple and had a greater range of motion than I had experienced in the past few decades. The next morning (this was in December) I went for my usual run, during which my Raynaud's characteristically announces its presence at about 10 minutes into the run and persists throughout the run (another 30-40 minutes) and remains for an hour or so after, even after showering and otherwise feeling warm. But this morning nothing happened to my fingers. They did not become pale, lifeless, nor did they sting or make it difficult for me to unlace my shoes or insert the key card and turn the door knob of the room to the Navy Lodge. The benefits of this one treatment persisted for the next two months, then gradually the Raynaud's returned, but only to the tips of a few fingers. I received a second acupuncture treatment five months after the first and now, nearly a year later, have continued to be almost totally free of symptoms, except in the coldest of conditions and then only after a long exposure.

Many other of my classmates were treated for various conditions (radiculopathies, interstitial cystitis, arthritic joints, etc.) and virtually all benefitted from the treatments, making even the few cynics and skeptics believers in the value of this simple, safe and inexpensive tool that has been time-tested for several thousand years.

Part three will run on Thursday, Jan. 5.

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James Stevens

This reminds me of the scene in The God Complex, when the doctors uncover the meanings behind the kata and realize the significance of points such as LI18. This is the location of the Vagus nerve, which innervates many organs – heart, lungs, liver, etc. Many of the issues we face are bioelectric. Biochemical reactions require energy. Yet, Western medicine only focuses on the biochemical aspects of health, ignoring the source of many disorders.

- John Westerfield
The article is overflowing with logical fallacies. It's a shame that only favorable comments are posted. It shows your inability to even contemplate criticism yet alone respond to it in any constructive manner. What a disastrous turn of events for a physician's career.

- spilipflore
@John Westerfield

Thank you for your comment on "The Power of Acunpuncture" blog series. Navy Medicine Live is a forum for open and frank dicussion about the medical care of our nation's Sailors and Marines and as such, we welcome all feedback and criticism and hope to engage in dialogue with our readers. Thank you again for commenting and we look forward to engaging with you in the future.

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Written on JANUARY 5, 2012 AT 8:20 AM by PROSS

The Power of Acupuncture: Part 3 of 3

Filed under UNCATEGORIZED

{5 COMMENTS}

By Capt. Elwood W. Hopkins, Neurologist, Naval Hospital Bremerton, Wash.

This blog is part three of a three part series. Part one was posted on Dec. 22 and part two posted on Dec. 29.



Upon return to my neurology practice at Naval Hospital Bremerton, Wash. in December 2009 I immediately began treating several of my own patients with acupuncture. And, as the other more experienced acupuncturist at our hospital, Dr. Son told me, once you learn how to use acupuncture, it will transform the way you practice medicine. Indeed, he was correct.

I now have provided more than 1,000 acupuncture treatments and have treated a variety of conditions: headaches, TMJ Syndrome, plantar fasciitis, prostatitis,

IBS, acute and chronic joint problems, vertigo, post-operative pains, nerve root, chronic and acute back and neck problems, myofascial pain syndromes, fibromyalgia, athletes with focal maladaptive musculoskeletal problems, chronic fatigue, depression, painful peripheral neuropathies, and as an aid for smoking cessation, weight control, and detoxing opioid-dependent patients.

About 90% of patients get a good result and many a spectacular benefit. One 70-year old man with 30 years of painful diabetic neuropathy returned after the first treatment describing his benefits as “a miracle,” enabling him to do a full day of yard work with repeated lifting, bending and stooping; things he had not been able to do for decades. Another patient with spinal stenosis and chronic sciatica has, after four treatments, remained asymptomatic and able to pursue his classic car restoration projects, which require stooping and bending over fenders in engine bays, etc., for the last three months. Some patients don’t respond, and it is never clear why, at least not to me. Although a single treatment can provide lasting relief, we were trained to expect that for chronic problems, an initial course of about six treatments, ideally once or twice a week, would be best, after which the condition might need “tune up” treatments at various intervals, or not at all. Acute problems typically respond to just one treatment.

Although there are many different acupuncture courses, I was especially pleased with the scientific principles that formed the basis for the “Contemporary Medical Acupuncture” course provided by the team from Macmaster University in Toronto that guided our patient

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evaluations, enhanced our understanding of the musculoskeletal and neuromuscular pathophysiology, and assisted us in designing effective acupuncture treatment plans. The three other neurologist in my class concurred and we all graduated with an expanded appreciation and enthusiasm for putting this fabulous tool to work.

Our class of 27 students also included psychiatrists, a gastroenterologist, chiropractor, rheumatologist, podiatrist, gynecologist, endocrinologist, sports medicine physician, a few residents and several family medicine physicians. Clearly, anyone caring for patients should consider adding this tool to their kit.

The acupuncture needles are actually rounded at the ends, unlike bevelled “cutting needles” and insert between tissues rather than cutting through and damaging fibers. Non-nociceptive pressure is applied by one hand of the acupuncturist as the needles are advanced to the desired depth with the other hand. The pressure is a more robust and faster-conducted sensation, thus blocking any pain that might be felt as the needle is inserted. Needles are of stainless steel, individually wrapped, sterile and disposed of after each use. Although the adverse effect rate of acupuncture is 1/50,000 treatments, all of these (infection, pneumothorax) are preventable with proper technique.

There are no contraindications to acupuncture including treating patients on anticoagulants. Some patients may have punctate areas of bleeding when needles are removed and these are readily stemmed with a cue tip. I have treated adolescents and nonagenarians but would not recommend treating children who might find the experience intimidating and frightening, especially if unable to understand what is being done and why. The only other patient I would not treat would be one who did not want acupuncture. I have treated two patients who felt the acupuncture made them worse, so like everything else in medicine, you can’t always have a successful outcome.

Treatments take about 30-45 minutes, including patient assessment, explanation of the process and placement of needles, application of electrical stimulator and completion of the treatment. Some patients may become light-headed from treatment, especially if they arrive dehydrated. This is caused by both vagal reactions for first time treatments and the vasodilatory effects of the treatment (it is a good treatment for hypertension, especially a hypertensive emergency). Treatments are performed with patients recumbent or in a massage chair. Many patients I have treated have been able to reduce or eliminate the use of analgesics, including opioids, as well as antihypertensive medications and several of the patients who have diabetes have found it easier to control their blood sugars, often with fewer medications. Fewer antidepressant, tranquilizing and sleep medication needs are other benefits about which patients have commented. I have one patient who was about to undergo surgery as a last resort for cervical radiculopathy, but cancelled his surgery after a few acupuncture treatments and has remained asymptomatic for several months.

It is now evident to me that there truly is a great benefit to acupuncture. If you have ever received acupuncture, share you stories in our comments section.

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Dr.Heidi Fu, RN, LAc., DAOM

I like this article very much! I have shared this with all my social network contacts (facebook, g+, twitter). I am glad your military uses acupuncture for pain management, I am 100% supportive 😊 Dr. Heidi Fu

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Megan Kingsley Gale, EAMP/L.Ac. (MSAOM)

This is a wonderful series of articles. You do a great job explaining how acupuncture works from a anatomical/neurological perspective. I love your enthusiasm. Regarding pediatric acupuncture, consider referring out to an East Asian Medical Practitioner (title of a Acupuncturist with a masters or doctorate degree in Acupuncture and Oriental Medicine in Washington state). My daughter, age 2.5, and diagnosed with Crohn's disease at 18 months, has had good success with this medicine as an adjunct to her pharmaceuticals and special diet. I hope all physicians who take a course in acupuncture have at least two East Asian Medical Practitioners to refer to. When your treatment is not working for the patient, consider your diagnostics. EAMPs have several more years of training in the diagnostics of this particular medicine and may be able to shed some light for the "difficult" cases. In the future, I hope the Navy (and TriCare) considers acupuncture as a viable modality and hires EAMPs at their medical facilities. I have seen great success with this medicine in many cases that did not respond to standard treatment and many cases where healing rate was greatly increased where this medicine was an adjunct to conventional care.

Acupuncture is a great way to treat pain and anxiety without the use of opiates.
-Navy wife

Carlo St. Juste Jr., L.Ac, MAOM

Thanks for the great article. I know in the news recently there has been much attention towards integrating acupuncture into different branches of the military. I did share this with a few friends of mine who enjoyed it.

R. L. Vernon RN, MS

As a retired naval officer, I both deeply concerned and, quite frankly, profoundly saddened by the influx of pseudoscientific CAM into military medicine. Precious health care dollars wasted on CAM can be much better spent!

The author states: "There is nothing like personal experience to convince one of an effect." Anecdotal evidence alone cannot support the efficacy and continued use of this modality. Anecdotal evidence is a heavy component of these articles and uncontrolled observations are subject to confirmation bias. A concerted effort to fully survey medical and scientific research archives on the subject will reveal the ever growing body of evidence that acupuncture offers no more than a classical placebo effect. The attentions and even the very mannerisms of the acupuncturist have much more to do with any effect on a patient's condition than the mystical placement of tiny needles. I'll admit that the placebo effect can be powerful in many psycho-social aspects, to be sure! But in the spirit of appropriate risk/benefit informed consent of the patient, it has been considered ethically suspect to represent acupuncture, or for that matter, most CAM practices, as any sort of proven medical treatment. And applying acupuncture as a veiled placebo is a form of deception that has no place in medical care.

What's next for Navy Medicine? Commissioned naturopathic "doctors" or perhaps native shamans in the Medical Corps? Therapeutic Touch as a recognized Nurse Corps subspecialty? Naval hospital pharmacies stocking healing crystals? Corpsmen with acupuncture needles, baggies of herbs and bottles of homeopathic remedies displacing field dressings in their B1 bag on the battlefield?

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